

REMARKS

The Final Office Action mailed September 26, 2007, has been received and reviewed. Claims 1 through 9 are currently pending in the application. Claims 1 through 9 stand rejected. Applicant has amended claim 1, and respectfully requests reconsideration of the application as proposed to be amended herein.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 4,547,836 to Anthony and further in view of U.S. Patent No. 6,190,834 to Narahara et al.

Claims 1 through 7 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Anthony (U.S. Patent No. 4,547,836) and further in view of Narahara et al. (U.S. Patent No. 6,190,834). Applicant respectfully traverses this rejection, as hereinafter set forth.

To establish a *prima facie* case of obviousness the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 985 (CCPA 1974); *see also* MPEP § 2143.03. Additionally, there must be “a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742, 167 L.Ed.2d 705, 75 USLW 4289, 82 U.S.P.Q.2d 1385 (2007). Finally, to establish a *prima facie* case of obviousness there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Furthermore, the reason that would have prompted the combination and the reasonable expectation of success must be found in the prior art, common knowledge, or the nature of the problem itself, and not based on the Applicant’s disclosure. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed. Cir. 2006); MPEP § 2144. Underlying the obvious determination is the fact that statutorily prohibited hindsight cannot be used. *KSR*, 127 S.Ct. at 1742; *DyStar*, 464 F.3d at 1367.

The 35 U.S.C. § 103(a) obviousness rejections of claims 1 through 7 and 9 are improper because the cited references do not teach or suggest all of the claims limitation and there is no motivation to combine the references.

Applicant’s invention as presently claimed recites, in part, “an insulating layer *from said*

first side to said second side of said semiconductor substrate on said inner surface in said hole”.

The Final Office Action concedes “Anthony fails to teach Applicant’s amended claim limitation requiring the additional step of forming an insulating layer on the inner surface of the hole and then plating over the insulating layer.” (Final Office Action, p. 3).

The Final Office Action then alleges “Narahara teaches oxidizing the inner surface of a hole to improve adhesion to a subsequently plated metal layer (Col. 1, lines 45-65).” (Final Office Action, p. 3). Applicant respectfully disagrees. Namahara teaches of “through-holes” for forming “via-holes” which connect a first surface with “inner circuits in a lower layer”. Accordingly, Namahara’s “through-holes” and “via-holes” do not extend from a first side of the semiconductor substrate to a second side of semiconductor substrate. Therefore, Namahara cannot teach Applicant’s claim element of “an insulating layer *from said first side to said second side of said semiconductor substrate* on said inner surface in said hole” as claimed in Applicant’s amended independent claim 1.

Therefore, Applicant requests that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to independent claim 1 and claim 2 through 7 and 9 which depend therefrom.

In further support of the non-obviousness of Applicant’s claims 1 through 7 and 9, Applicant respectfully asserts that there is no basis for combining the references. The Examiner is respectfully reminded that there must be “a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742, 167 L.Ed.2d 705, 75 USLW 4289, 82 U.S.P.Q.2d 1385 (2007). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (holding that “although a prior art device may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.”).

Specifically, Applicant’s invention as claimed recites a “semiconductor substrate” including “a hole” and “plating” through the hole. Furthermore, Applicant’s invention as

presently claimed recites “an insulating layer” between the semiconductor substrate and the plating. In contrast, Anthony teaches of a glass substrate which is already very highly insulative. Accordingly, there is no motivation to form an unnecessary “insulating layer” on an already highly insulative substrate of Anthony as alleged in the Final Office Action.

Additionally, “it is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teaching of the prior art so that the claimed invention is rendered obvious One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *In re Fritch*, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

For these reasons, Applicant asserts that a 35 U.S.C. § 103 rejection of independent claims 1 and claims 2 through 7 and 9 based on Anthony in combination with Narahara is improper and respectfully requests that the rejections be withdrawn.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 4,547,836 to Anthony and U.S. Patent No. 6,190,834 to Narahara et al. as applied to the claims above, and in further view of U.S. Patent No. 5,487,218 to Bhatt et al.

Claims 6 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Anthony (U.S. Patent No. 4,547,836) and Narahara et al. (U.S. Patent No. 6,190,834) as applied to the claims above, and in further view of Bhatt et al. (U.S. Patent No. 5,487,218). Applicant respectfully traverses this rejection, as hereinafter set forth.

The nonobviousness of independent claim 1 precludes a rejection of claims 6 and 8 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to independent claim 1 and claims 6 and 8 which depend therefrom.

CONCLUSION

Claims 1 through 9 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,



Kevin K. Johanson
Registration No. 38,506
Attorney for Applicant
TRASKBRITT
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

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KKJ/dn:lmh
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